

FIRST RECORD OF PHRUDINAE
(HYMENOPTERA: ICHNEUMONIDAE) FROM SOUTH AMERICA
WITH NOTICE OF A NEW GENUS AND
SPECIES FROM CHILE

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Abstract. — *Notophrudus mendozi*, new genus and species, resembles the Holarctic genus *Phrudus* (as defined by Townes, 1971) but has a tiny though strong tooth dorso-apically on the front tibia, lacks pectination on the tarsal claws and has the 1st gastric segment uniquely slender, parallel-sided, and with its spiracle closer to the tergal base than in any other phrudine. *Notophrudus* inhabits *Nothofagus* forests in Chile's Lake District (Cautín to Osorno Provinces).

The Phrudinae (Townes, 1971) are a small, polythetic subfamily in which the flagellum often is stout, moniliform and with fewer than 20 segments; the clypeal margin has a transverse fringe of long and parallel setae; and the gastric epipleura are wide, decumbent and often not separated by creases from their tergites (or with only epipleura 2 and 3 so demarked). The subfamily occurs in all biogeographic realms with best representation in the Holarctic but with species also in the Neotropical, Neantarctic (temperate Chile and nearby southwest Argentina), Australian, Oriental, and Ethiopian regions. Two of the 10 phrudine genera have been reared and these are endoparasites of coleopterous larvae.

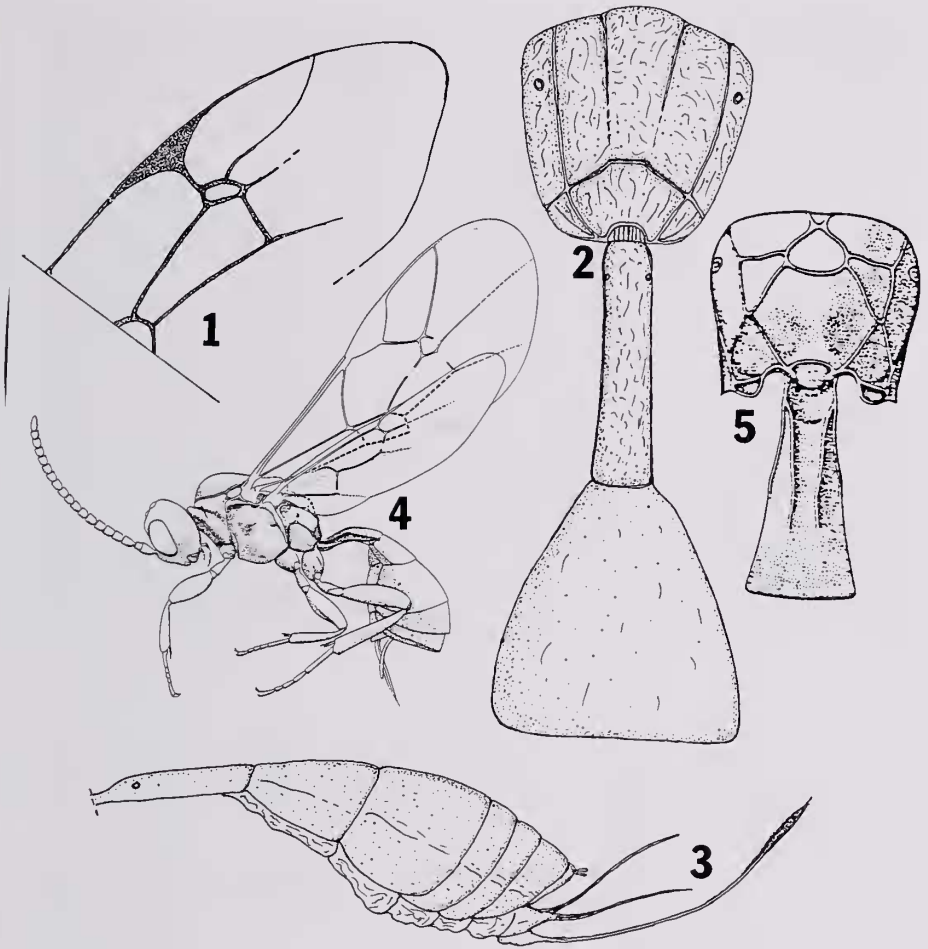
Notophrudus shares many characters with *Phrudus* (Townes, 1971; Gauld, 1984), but differs in such features as its small though strong tooth on the dorso-apical end of the front tibia, its lack of teeth on the tarsal claws, in its scheme of propodeal areolation (cf. Figs. 2 and 5), in its uniquely elongate 1st gastric tergite with spiracles much closer to the base than to the middle (cf. Figs. 3 and 4), in its somewhat compressed gastric tergites 2 and following [the type species of *Phrudus*, *P. monilicornis* Bridgman (1886), has the gaster bulbous and circular in cross section], and by its upcurved ovipositor which is much longer than the apical height of the gaster.

Phrudus Foerster, 1868

Figs. 4-5

Phrudus Foerster, 1869:196. (Type species *Phrudus monilicornis* Bridgman, 1886, by monotypy.)

Townes' (1971) figures of *Phrudus monilicornis* Bridgman are included to facilitate appreciation of the notable differences between this genus and *Notophrudus* Porter, as seen in ovipositor length, gastric proportions and contours, propodeal areolation, and wing venation.



Figs. 1–5. Figs. 1–3. *Notophrudus mendozi*, female. Holotype. 1. Apical half of fore wing showing venation. 2. Dorsal view of propodeum and first 2 gastric tergites. 3. Lateral view of gaster and ovipositor. Figs. 4–5. *Phrudus monilicornis*, female. Type species of *Phrudus*. 4. Entire insect in lateral view (from Townes, 1971). 5. Propodeum and first gastric segment in dorsal view (from Townes, 1971).

Notophrudus, new genus

Figs. 1–3

Diagnosis. Flagellum unusually short; in females 0.7 as long as fore wing, with 16–17 segments of which those in its apical 0.3 are moniliform; in males with 19 flagellomeres, all moniliform. Clypeus 2.4 as wide as long, broadly elliptic, its surface weakly convex and subapically bearing a transverse fringe of numerous (but not dense) long and parallel setae. Temple long and broad, in dorsal view convex and gently receding rearward; 1.1 as long as eye in lateral view. Frons smooth and polished.

Malar space without a vertical suture. Front tibia with a tiny but strong tooth on its apex dorso-apically. Tarsal claws not pectinate. Mesopleuron mostly smooth and shining on its upper 0.5 but ventrally less polished and with fine reticulation; epicnemial carina well developed over its entire extension from the lower part of the mesopleuron dorsad to about the level of the mid-height of the front mesopleural margin. Pterostigma broadly triangular. Propodeum with basal transverse carina absent, areola and basal area confluent to form an elongately rectangular area (median longitudinal carinae partly weak and in places strong), with apical transverse carina very strong, costula absent, lateral longitudinal carinae traceable throughout but not uniformly strong, and with the pleural and submetapleural carinae strong and percurrent. Areolet irregularly pentagonal, broadly sessile dorsally, 2nd intercubitus partly desclerotized and much longer than the 1st intercubitus; cubital and subdiscoidal veins in large part desclerotized but visible to wing apex; mediella desclerotized except near base; radiella, cubitella, discoidella and brachiella either absent or visible toward base and only briefly pigmented. First gastric tergite very long, slender, and parallel-sided, 3.3 as long as wide at apex, its spiracle much closer to base than to middle. Gaster moderately compressed toward the apex. Ovipositor long (0.4 as long as fore wing), gradually but distinctly upcurved between base and apex, nodus very weak, far from apex of the dorsal valves.

Etymology. *Notophrudus* is a latinized conflation of the Greek words *notos* ("south") and *phroudos* ("gone, ruined"), the name that Foerster (1869)—for unknown reasons—bestowed on what has come to be the type genus of its subfamily.

***Notophrudus mendozi*, new species**

Figs. 1–3

Description. Female. Antenna dark brown, becoming blackish toward apex; head, mesosoma, and gaster shining black with mandible and clypeus pale brown, gastric tergites with a dark brown tint, and sternites pale brown; legs dull pale brown.

Length of fore wing 2.5–3.4 mm.

Flagellum with 16–17 segments of which the basal 8 are submoniliform, the following 8–14/15 are more strongly moniliform but still longer than deep, and the last 3 are more crowded and robust than the others (which makes the flagellum weakly clavate). Head arched dorsally well above the eyes, so that the front ocellus is located high up on the vertical interocular line. Mandible elongate, its lower tooth a little shorter than the upper.

Mesoscutum mesally and apically sublustrous with fine aciculo-punctuation but on the lateral lobes contrastingly smooth and shining; notauli weak but visible for ± 0.5 the mesoscutal length. Ventral metapleuron delicately rugoso-aciculate.

Propodeal spiracle very small, not enclosed by a carina.

First gastric tergite almost parallel-sided in dorsal view and with \pm longitudinally biased fine carinae and aciculae. Following tergites very smooth and polished with only a few scattered, tiny punctures and some widely spaced setae; their epipleura broad (especially 3 and following) but not set off by creases dorsad nor reaching so far ventrad as to cover their sternites. Sternites membranous but with some sclerotized areas.

Male. Length of fore wing 3.6 mm.

Flagellum with 19 segments of which the 5th and following are moniliform and a

little longer than deep; whole flagellum very slightly clavate but with the more apical segments discrete and the last segment sharply pointed distally and 3.5 as long as the penult.

Propodeum with its spiracle larger and more clearly enclosed by a carina than in the female.

Epipleura of gastric tergites 3 and following wider than in the female and \pm meeting ventrad over the sternites.

Holotype. Female, Chile (Cautín, Conguillillo, 4-5-II-1988, 1,150 m, L. Masner), in collection of the American Entomological Institute.

Paratypes. 1 female and 5 males, Chile (Cautín, Conguillillo, 4-5-II-1988, 1,150 m, L. Masner; Osorno, Puyehue, 16-II-1988, 1,200 m, L. Masner), in the American Entomological Institute.

Habitat notes. The type series of *Notophrudus mendozi* was trapped in the Andean precordillera between 38–41° South Latitude within the Valdivian Biotic Subprovince of south-central Chile (Porter, 1991). These forested biotopes are dominated in the arboreal stratum by *Nothofagus* spp. (Fagaceae) along with various Myrtaceae, *Eucryphia* (Eucryphiaceae), *Gevuina* (Proteaceae), and *Drimys* (Winteraceae); in the shrub and large herb stratum, by *Desfontainea* (Desfontainaceae), *Fuchsia* (Onagraceae), *Berberis* (Berberidaceae), *Myrceugenella* (Myrtaceae), *Embothrium* and *Lomatia* (Proteaceae), *Gunnera* (Gunneraceae), and *Chusquea* (Bambusaceae); as well as in the smaller understory layer by *Asteranthera* (Gesneriaceae), *Philesia* (Philesiaceae), *Viola* (Violaceae), *Calceolaria* (Scrophulariaceae), and *Oxalis* (Oxalidaceae). The Valdivian forests at these latitudes have an annual rainfall varying from 1,100–5,000 mm and exist under a cool-temperate thermic regimen, with highs between 12–22°C in summer and winter minima (at low altitude) averaging from 5–10°C with relatively infrequent dips below freezing (Hoffmann, J., 1982).

The humid Valdivian forest seems an appropriate habitat for *Notophrudus*, since Townes (1971) remarks that *Phrudus* is "usually collected by sweeping in woods."

Specific name. This species is named for Ricardo Mendoza M., Technician at the Instituto de Agronomía of the Universidad de Tarapacá (Arica, Chile), in recognition of his expert and good-natured assistance on many collecting trips.

COLLECTIONS

All material seen during this study is deposited in the American Entomological Institute (3005 SW 56th Avenue, Gainesville, Florida 32608, USA).

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